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CHAPTER XI

CONCLUSION AND PERSPECTIVE

(1) At the end of a long and protracted investigation a few words of comment and interpretation of the whole scheme of things are in order. Author and reader together should ascertain what was intended and what has been accomplished. The first question raised by reader and critic is usually why this particular type of study was made and not another one—a legitimate query when there are many possible approaches, and when the field is new and not well circumscribed. Yet the question is also futile, since, in order to make a valid statement, alternative studies would have to be available with which to make a comparison. They are not; and because of the difficulty residing with the data—or rather their lack—conjectures regarding the nature and the outcome of such studies are extremely hazardous. It would however be appropriate to ask whether we have squeezed all possible information from the data we used. The answer to this is clearly in the negative; in fact we have repeatedly indicated that a deeper exploration of the material used in the preceding chapters is perfectly feasible. On the other hand any procedure using far more refined statistical and mathematical methods would require a preliminary survey such as this one attempts to be. Thus we can state as the first consideration that our study should have yielded a tool for further use, and may incidentally also have produced some directly useful insights into the relationships between business cycles and financial operations in important countries over a significant period. We hope this has actually been accomplished; we also hope that additional studies will be undertaken now that the ground has been prepared.

Since in Chapter I our methodological position was clearly set forth and at the end of each subsequent chapter the successive results were summarized, sometimes in special tables (cf., for example, Tables 20, 21, 40, 70, 93, 136, 138, and 139), it is necessary only to interpret the whole in order to give relevance to the partial findings. Clearly the scope of problems outlined in Chapter I is far larger than the actual investigation aimed for. The fact that we did less than was mapped out as the comprehensive problem was in part due to the relative ease or difficulty of obtaining the data, to

the coherence of the data from the point of view of some guiding theoretical or at least commonsense principles, and last but not least, to the physical bulk of even the limited study at the chosen level of detail. Thus had we been satisfied with yearly or even quarterly data, with summary indexes, with rather sweeping verbal, historical accounts, etc., a broader and, from many standpoints, more satisfying picture could have been drawn. However the detail into which the investigation went was chosen deliberately, because only at this level of fineness could some of the classically postulated relationships among the economic quantities in question be tested. These "tests" furthermore are themselves far from exhaustive if one bears in mind what present statistical technology could accomplish.

(2) The study covered a period including the principal time of the effective, classical gold standard and the time after World War I when it was still in use, though in a somewhat watered-down fashion. The systems of both periods, though not identical, are vastly different from the monetary systems and government policies that sprang up after World War II. Yet one of the primary observations made time and again in the preceding chapters is that even World War I brought about such behavioral changes as to make it virtually impossible to extend theoretical explanations, say, of the interaction among interest rates from one of these periods to any other period. Contacts between countries have become loose, no doubt because of their governments' policies, their craving for "independence," and possibly because of a substantial shift in the center of gravity of economic power. The observation of the loosening of contact, i.e., in terms of the tight contacts before 1914, holds for every single field in which comparative behavior was studied. The test for randomness, applied to the business cycle as a whole (Chapter II, section 2), is conclusive not only for the aggregate movements but also applies for each separate area studied thereafter. The very simplicity of the test, both logically as well as computationally, makes this result the more secure. Though it is not surprising, we now have confirmation that a theory of the international spread of business cycles is bound to be of exceptional difficulty, at least as far as economic theory notions of difficulty go. The observed break in the behavior of our series occurs for a time when only minor changes occurred in the monetary and economic organization of our four countries. But we know that for other times and other countries there were, and are now, very different forms of organization; but for these too there are records

of business fluctuations and even cycles, and there is no doubt that there also were contacts among the countries to which those observations pertain. In view of this it may well be that for a long time to come more is to be expected from verbal-historical accounts and statistical-historical investigations dealing with particularly noteworthy instances of simultaneous crises or suspected transmission of disturbances than from an attempt to establish a universal theory applying to all forms of organization.

Apart from the break in structural relations concomitant with the occurrence of World War I, there are some results worth mentioning even though they cannot be put into numbers. There is, for one, the expectation that a study like ours for the time after World War II would probably show even further loosening of ties and still greater diversity of movements, due in part no doubt to the still greater monetary autonomies throughout the world, in part to the powerful economic forces set into motion for political reasons, e.g., the Marshall Plan and its successors. The past (as well as the present) breakdown of the forms of monetary organization—or, stated in a more neutral manner, their transformation into new shapes—has so much altered the type of interaction between the financial markets that, even if we had proof of the correctness of the classical theory, it would not be easy to prove that it also applies to the modern forms and what the new limitations are.

There is furthermore in our researches confirmation of the idea put forth in Chapter I that financial markets interact more intensely in times of stress and great activity than in relatively quiet periods. This can be extended to the case where economies are not interacting with equal strength sector by sector, whatever the sectors into which they can be reasonably divided. The financial sectors are of course among the most active, provided the countries are sufficiently far advanced institutionally. The fact we established that *the degree of interaction varies with the level of activity* is, we believe, not only important in this field of study, but is of wider significance. It should be studied also for closed economies where probably the same fact holds. There is not, in a business economy, only one kind of "dependence" or "interdependence"; there are many types. Some of these emerge only when the activity levels rise, e.g., steel consumers do not depend as much on the steel industry in slack times, when there are stocks in the hands of dealers, as in times of strong expansion. Others show up when the levels of activity fall.

If it had been possible to describe the changes in dependence of money markets in more detail, we would have learned a good deal about the spread of fluctuations, rather than essentially only about their simultaneous occurrence. Nevertheless the "effort" series of Chapter VII do considerably more than has hitherto been done to describe the phenomena of changing dependence. Chart 28 in particular tells us about the relation of a given market with *all* others simultaneously, not only with one particular market at a time. It gives as much information as can be obtained from combining our data with a very limited conceptual apparatus.

The changes in the nature and degree of dependence are one of the aspects of the spread or diffusion of movements within a system. They are not easily determined quantitatively. We may expect later writers in this area to provide new and better descriptions and measurements of these phenomena, and it may be possible to incorporate these notions into the general body of economic theory.

We furthermore point out that in our series we have independently uncovered all the well known international and domestic financial disturbances, but there are many more shown that were not known. It will be the task of economic historians to describe these and to establish their significance. Even in the appendix, which was not designed to give more than general background material, there are records of political events which may very well have been accompanied by the disturbances registered in our new data, notably in the "effort" series. It may be easier to explain these exceptional points in terms of changing degrees of dependence than in terms of stable, uniform connections among the whole series.

(3) Next it is necessary to return once more to a theme running through the entire book—the nature of the data and the difficulty of ascertaining their quality. At this point a reference to the subject matter is needed for the following reason: the study has been broken off in several places precisely because existing data had to be rejected for want of quality, however desirable it would have been to treat the particular area. The most noteworthy and painful instance is the omission of all statistics on international gold movements. This is in the nature of an anomaly in a work in which gold plays a fundamental role. The evaluation of the gold statistics has been made elsewhere;[1] the result was that they are useless for

[1] O. Morgenstern, *The Validity of International Gold Movement Statistics*, Special Papers in International Finance, No. 2, International Finance Section,

many purposes, most certainly for ours, which involve a fine structure imposed by the very nature of the financial processes. Since gold figures would be the dominant item in balance of payment statistics, their uselessness also invalidates the latter aggregate, though possibly some other components may remain of interest for particular purposes. Neither could the investigation be extended to include foreign trade, partly because of the vastness of that undertaking, partly because of the suspicion that foreign trade data are even worse than those of gold. (Many tests have strengthened the author's firm belief that most of them are.) Apart from this, we note that a "balance of trade" is at any rate logically a thoroughly unsatisfactory and scientifically untenable concept, inasmuch as it rests on purely arbitrary decisions concerning what to consider as "visible," "invisible," and a "commodity." The only satisfactory procedure would be to deal with individual items of the whole spectrum from the telegraphic transfers to the immovable real estate, depending on their specific functions, via intermediary, economically meaningful aggregates to the final aggregate of *all payments* across borders. This vast undertaking was beyond the plans for this book.[2]

In the same vein there is no point in considering a "national income approach," for example, to discover the relation between foreign investment and its influence on income in the countries concerned. The reason is very simply that for the period there are absolutely no useful data on hand, that what exists are at best estimates for larger time intervals than we had to consider, and that the relations between these factors are still very controversial on a more abstract theoretical level. The connection between national incomes, gold points, and short-term interest rate differentials is at best rather obscure. Speculation in this area would have been quite beside the point in this study when the classical problems still offered so much to be cleared up.

It is hard to see how another study could compromise with

Princeton University, November 1955. Although foreign trade movements were not part of our investigation—whatever the quality of the data—gold movements would have been included except that the data were found wanting in quality.

[2] However the studies now under way at the National Bureau of Economic Research on the structure of world trade and payments and on cycles in foreign trade should help us to assess not only the adequacy of the statistics but also the substance of certain aspects of international economic relations that we have not presumed to treat.

regard to the data, unless it decreased the degree of detail in the description of the various mechanisms. A real dilemma is posed: economic theory has unquestionably postulated a fine structure in the international field; yet we cannot describe it fully enough in all important directions with the aid of the data we can gather for the past. One could make broader historical observations, but as a rule they will not be such as either to corroborate or to contradict the theory statements. For this they are too "broad." There is only a rather narrow field where we may reasonably hope to match data and theory. This is the area of our investigations, with which we assume the reader of this chapter to be quite familiar.

(4) We shall now show the peculiar difficulty to which our attempt has led us and shall enumerate the alternative decisions which might be made. Finally (in 5 below), we shall indicate that besides this rather clear-cut dilemma there is still another possibility on the horizon—definite and important, but so far only on the horizon—which hinges on some fundamental prospects of economics.

Many of our findings have run against commonsense expectations or expectations based on parts of the theory of international trade. For example, the cross rates of exchange behave "irrationally" in that there are neither zero, nor small, nor clearly constant differences between them and the direct rates. Then there are the peculiar lasting differences among interest rates which were extensively discussed. But foremost there is the behavior of the exchange rates in regard to the gold points—a crucial issue. It was found that the rates frequently, and often for long, continuous intervals, push past the maximum gold points, insofar as we know them. In fact the rates are already monthly averages and therefore minor violations of a day or so—which everyone would clearly consider negligible—are automatically disregarded. Finally the investigation of Chapter VII, in which a logically sound method was developed and applied showing the relative stresses exercised by money markets, revealed almost fantastic discrepancies between the observed behavior of the markets in respect to each other and that postulated by, and inferred from, the principles of the gold standard, even if the latter be formulated in a very watered-down fashion. And these principles were supposedly most applicable for the major period with which we have been concerned!

Thus the dilemma is the following: either we reject the data which were used and question the manipulations to which they

were subjected, or we reject the theory which was used in combining and interpreting them. We may of course reject both, in which case a big, peculiar void opens. These possibilities will be discussed briefly in the following order.

First: we reject the data, i.e., those which produce the conflict, *and hold on to the theory.* Clearly the reader has been made aware of the error components in the data to an extent perhaps not always found in writings of this type. Repeated reference to other work by the author on the problems of accuracy of economic observations has demonstrated concern, if not skepticism, regarding the quality of the data commonly used in economics. If the data were nevertheless used this means that no better could be found and that no devices became known to test them in any specific manner for errors of observation. The data, say, of exchange rates were not rejected as were the statistics of gold movements, because there was no comparable direct and convincing test for their error component. Neither were there other strong grounds for rejecting them. The delicate point in this connection is that the (unknown) error unquestionably increases with each further digit. Yet for exchange rates and gold points in particular many digits are required to make the basic, theoretical argument meaningful at all. The violations of gold points by the exchange rates would be made fewer by using cruder data for both, i.e., by arbitrarily reducing the number of digits, but other historical evidence is that operators in the markets actually did profitably use information involving at least as many digits as occur in our statistics. Thus it would be improper to drop digits.

To stay with this example, unquestionably only trivial improvements can be made in our exchange rate statistics; no better exist. The gold point data could be greatly extended; perhaps even time series can be constructed, such as the "effort" series of Tables 74 and 75. But this would depend on the accident of finding them scattered in individual records, in bank archives, etc., and consequently on the expenditure of very large sums for the search. Even then, far from making it certain that the dilemma would be removed, finer gold point data would increase the chances for deviations. Thus the decision as to how fine a structure of the theory to use would become necessary again. The principles for the construction of the "effort" series would not be changed, since the underlying logic is not debatable from the point of view of the data. The deviations these series give from the permissible limits

are frequently so enormous that only equally enormous modifications in the data (in the "right" direction!) could make a difference. It is hard to see where such different information should come from. Not even much and varying new detail regarding the loan periods—which have such an important influence upon the determination of permissible interest differences (cf. Chart 24 and Table 76)—could turn the trick, although it could produce considerable changes.

Thus, if we were to go once more step by step through all the data used in the preceding chapters, we would hardly succeed in removing those peculiar discrepancies with the theoretical constructs to which we have related them. Neither can we forget that there is general historical corroboration of a kind which does not allow us to become more lenient and to blame our difficulties on our insistence on maintaining a very stringent attitude.

The explicit treatment of the stochastic properties of the data belongs in the area of the more intensive statistico-mathematical studies viewed as a possibility (cf. Chapter I, section 2). The essential feature in the present instance would be to determine probability distributions for each set of data and then to apply them to the mechanism in the manner of the preceding chapters. This is only a different way of stating what was discussed in the above paragraphs.

Second. We reject the theory and hold on to the facts irrespective of whether they are presented as in the earlier chapters or given in the cruder form of fewer digits discussed above as an alternative. This would mean that we view the period of the classical gold standard as inadequately described by the typical mechanism at least in one respect: the interaction between two and more money markets via exchange rates and interest rates is not nearly as precise and rigid as postulated, and the characterization of the mechanism is faulty inasmuch as it does not allow for hysteresis and for spontaneous, varying adjustment to different degrees of pressure.

Theory would be found to be too finely structured, since reality shows much more friction, although the theoretical formulations have been found quite convincing through the decades—at least by the theorists, who have made no significant changes since the mechanism was first described.

This situation is important, especially from a practical point of view. It has frequently been asserted, mostly in the 1930's, that

the gold standard mechanism imposed a very rigid behavior, a kind of strait jacket, upon the countries involved in it. Any unpleasant and undesirable variation in country A would *force* country B to very rigid, unpleasant, and undesirable readjustments; if B did not submit to the adjustment, it would cease to remain on the gold standard—a state apparently of overriding significance. The demands were chiefly for interest rate increases, guarantee of free, unhampered gold exports (after transfer of even more immediately available resources), and for limited exchange rate movements. There existed absolute, inviolable bounds.

We see now that our data do not bear out this contention. Instead of looking closely at the facts, however, the policy-makers and critics have simply accepted the theory. Now if we decide to throw away the theory in its classical form, the political consequences change correspondingly. A properly described modified mechanism, giving a correct picture, might have led to less extreme suggestions than the abolition of the gold standard altogether. Even in the descriptions of the facts underlying the working of the mechanism after World War I, there were serious mistakes. We have seen (Tables 34 and 35) that the gold points were farther apart in the post-World-War-I period than before, and that their violations, if occurring at all, were much fewer, although it was allegedly then that the hardships of the international monetary organization were most strongly felt.

A modification of the theory, so as to reconcile it with our data, is not as simple as it may have seemed above. It may seem trivial to relax requirements by introducing thresholds, time delays, etc., but such modifications could easily produce inconsistencies with other parts of economic theory (for example, that even the smallest advantages are utilized, especially in the monetary markets) and with strong institutional evidence (for example, that in arbitrage dealings operators used several telephones simultaneously in order to profit from changes in rates of small fractions of 1 per cent). Consequently the theory cannot very well be stated in terms of smaller incentives than those actually at work; in economics it is usually the other way around—stronger incentives are the device used in order to make theory possible at all.

Thus we are left with the disagreeable situation that, if we accept the data and reject the theory, we have no easy alternative. Few people will want to be maneuvered into this situation; somehow we find it easier to stick to a generalization, however obscure

its foundations may be, than to accept new facts or face the demolition of old ones. The human mind prefers order and rejects disagreeable isolated facts, especially when more than one relation can plausibly be established among them.

Third: the possibility next to be considered is that our observations and measurements are not intuitively acceptable, that the conflicts leading to the dilemma discussed under the two preceding headings are spurious, and that *in fact there is no problem at all,* except to make a different, and a fortiori better, selection of data instead of "improving" these. More precisely: the data which were used and the modest manipulations performed on them will scarcely ever be eliminated from a test of the interaction of money markets of countries on the gold standard. It is more likely that a proper test requires quite different data, some of which (such as the "effort" series of Chapter VII) might be derived from our basic data, others to be discovered elsewhere. This would mean that whatever theory we command in this area is already so sophisticated that our obvious, directly accessible data and measurements will not be decisive. Indeed the difficulties with the latter that we encountered might disappear in the light of the information flowing from deeper layers of fact.

This point of view must be mentioned for the sake of completeness, but it will hardly be found to apply. Unfortunately there is, for the time being, no evidence that such other facts exist, nor is it convincing that our theory is so advanced that the only or the chief data that are needed lack immediate intuitive appeal. There are at best only more data of the same *kind* as already used (such as figures on foreign trade, direct investments, movements of gold and securities, etc.), and reasons were given why they were not exploited. The only further possibility is—and the author believes it to be a promising one—that a more penetrating mathematico-statistical analysis of our material may produce surprises. Such a study does not exist at present and further conjectures about its outcome would do no good at this juncture.

In concluding the discussion of these points, this observation is in order: disturbing as the above dilemma may be, it is not at all undesirable. A mere confirmation of what was already known and summarized in the theory with perhaps some sharpening of formulation might be gratifying in the short run, but not much food for further thought would have been provided. Now this confirmation is not forthcoming, and we know at least how careful we shall

have to be in this area. If a transmission of fluctuations among countries is to be studied—clearly a topic of everlasting interest—one cannot do better than to start with the data-rich financial field. Thus the troubles laid bare here must influence procedure for more ambitious undertakings, especially when they are associated with more involved theory and more complicated concepts, such as, for example, net terms of trade, foreign trade multipliers, propensities to import, propensities to invest abroad, national income comparisons, etc. We stated at the opening of this chapter that the present book may provide a tool and be a starting point for such further studies. Now we can even add that future problems have been pin-pointed. As a rule there is a good chance that the mere formulation (not to mention the subsequent resolution) of a sharply defined dilemma actually produces a step forward (as is frequently the case in science). A clearly seen dilemma forces us to make decisions.

(5) We shall now point out briefly the possibility of looking at the situation from a different point of view altogether. So far we have considered the current views on the equilibrium and the stability of the gold standard mechanism and its variants. Among other things we were troubled by the fact that too much precision was assumed in the reaction of the financial markets to each other, and we were afraid that modifications might bring about a conflict with accepted theory in other fields. It is possible however that rigor and precision exist in the relationship among money markets after all, but that for their description we require a fundamental shift in our notions of "equilibrium" and "stability." In other words they may have to be replaced by very different ideas, such as are shown in the theory of games of strategy. Indeed this is a natural thought, for in the gold standard system we hardly have the characteristics of a "mechanism," but have instead one rather simple form of deliberate, willful struggle among the different markets for funds, among central banks for gold, among these banks and their domestic commercial banks for gold, among investors for placement, etc. All the essential requirements of true games of strategy are there: the interests of the different members of the international financial community are sometimes opposed and sometimes parallel to each other; the members do not individually control the outcome of their struggles, everything depending on *all* their actions. The theory of games has developed an adequate conceptual scheme for precisely such situations, and this has led

to very different ideas of equilibria in terms of which new, fruitful descriptions of the interaction of international monetary institutions are possible.

In order not to pursue further the implications of these observations, only this much will be pointed out: all that we discussed earlier in this chapter about the relations between our observations and the theoretical devices to explain them was based on the conventional notions of mechanism, equilibrium, response, etc. If however the interaction of money markets—regardless of whether static, cyclical, or otherwise—is better analyzed in game-theoretical terms, the fact that data and conventional theory do not tally well is nothing to deplore. On the contrary one may take comfort from this and hope that the data and the new theory will give the desired explanation. Since a step of this kind is not likely to be undertaken in the near future, we limit ourselves here to pointing out its possibility, essentially to indicate that neither the direction nor the extent of scientific development can as a rule be foreseen.

CHRONOLOGICAL APPENDIX

SUMMARY OF BUSINESS ANNALS FOR FOUR COUNTRIES

PREWAR

United States and International

1876—Decline in railroad stock prices after April; industrial slump, spring and autumn; bond prices steady; some recovery in exports, imports small

1877—Stock prices reach bottom, June; bond prices steady; silver agitation in Congress, last quarter; increased foreign trade

1878—Silver reinstated as legal tender, February; small imports, very large exports; Bland-Allison silver purchase act (United States)

1879—Rise in stock prices, especially last four months; increase in imports

1880—Stock market collapse, May, but recovery and boom after October, especially railroads; advance in bond prices; great activity in foreign trade

1881—Peak reached by railroads in May, and industrials in June; large issues of new securities; slight decline in foreign trade; assassination of Tsar Alexander II

1882—Boom in imports, decline in exports; temporary boom in stock prices, summer

1883—Increased exports; smaller imports; decline in railroad stocks and industrials

1884—Panic, May; bank failures, decline in stocks; reduction in foreign trade

1885—Silver agitation; further decline in foreign trade

1886—Some improvement in foreign trade and stock market

1887—Tremendous railroad construction and western real estate boom; larger imports

1888—Unfavorable balance of trade

1889—Favorable balance of trade; enormous volume of activity

1890—Financial strain in November with failure of banks and brokers; passage of Sherman silver purchase act, July; very active foreign trade

1891—Foreign trade expansion, especially exports
1892—Silver agitation; active foreign trade, especially imports
1893—Violent panic, May; crisis most severe, August; repeal of silver purchase act, August
1894—Reduction in foreign trade; many failures; coal and railroad strikes, summer; Chinese-Japanese War, July 25
1895—Difficulties with Great Britain over Venezuela, December; revival of imports
1896—Victory for gold standard; expansion of exports, falling off of imports; Klondike gold discoveries
1897—Higher prices of stocks and bonds; rates raised by Dingley tariff, August
1898—Declaration of war with Spain, April; peace declared, August; unprecedented exports
1899—Wild speculation on stock exchange, panic, December; increase in imports
1900—Formal establishment of gold standard, March; large foreign trade
1901—Stock exchange panic, May; Northern Pacific corner; copper market collapse, December
1902—Increase in imports, decline in exports; declining bond prices; coal strike, May to October
1903—Numerous commercial failures; exports large
1904—Collapse of Sully cotton corner; increase in imports
1905—Foreign trade expansion; Russo-Japanese War, February to September
1906—San Francisco earthquake and fire, April; increase in foreign trade
1907—Failure of Knickerbocker Trust Company, October; stock exchange collapse, March, August; record imports and exports
1908—Copper and cotton speculation; many railroad receiverships; foreign trade restricted
1909—Imports revive, exports decline; increase in tariff rates
1910—Fall in stock and bond prices; increase in foreign trade
1911—Decreased imports, increased exports; dissolution of Standard Oil and American Tobacco ordered by Supreme Court, May
1912—Large increase in foreign trade; Balkan War, winter
1913—Establishment of Federal Reserve System, December; decrease in imports, increase in exports

Great Britain

1876—Wide fluctuations in price of silver; large reduction in exports
1877—Anxiety caused by Russian-Turkish war, March; annexation of Transvaal
1878—Important bank failures causing distress in October; Afghanistan war, September; further reduction in foreign trade, especially imports
1879—End of Afghanistan war, May; revival in exports
1880—Foreign trade boom
1881—Slump in security prices, August
1882—Fall in silver; Egyptian troubles; increase in foreign trade
1883—Egyptian occupation; increased imports, smaller exports
1884—Rand discoveries in South Africa; slump in foreign trade
1885—Great decline in price of silver; reduction in foreign trade
1886—Fall in price of silver halted, August; Transvaal gold rush; low point reached in foreign trade
1887—Fall in security prices, first half, and then rise
1888—Stock market active with rising prices, especially British railroads; increase in foreign trade
1889—Advance in security prices; active gold mining speculation; increase in foreign trade
1890—Collapse of stock market prices, November; failure of Barich Bros.
1891—Reduction in foreign trade
1892—Reduction in foreign trade
1893—Australian crises, April, American troubles, October; drop in stock exchange prices; decline in foreign trade
1894—Speculative boom in South African shares late in year
1895—Collapse of South African boom, September; increase in foreign trade
1896—Rise in security prices, autumn; increase in foreign trade
1897—Rise in stock prices to November and then drop; increased imports, smaller exports
1898—Strained relationship with France over spheres of influence in West Africa and Fashoda in upper Egypt; Sudan reconquest, November
1899—Peak reached in security prices, July; declaration of Boer war, October; reverses, November and December; increase in foreign trade

1900—Rapid rise in industrial stocks, first quarter; boom in American railways
1901—Collapse of Northern Pacific corner; American railways boom, May; peak reached in industrial stocks, March, rapid decline; decline in value, not volume, of foreign trade
1902—Falling prices on stock market; end of Boer war, May
1903—Revival in foreign trade
1904—Difficulties with Russia over attacks on neutral shipping
1905—Rise in stock prices; big increase in exports
1906—Collapse in stock market early in year, but revival last quarter; record expansion of foreign trade
1907—Financial stringency, autumn; stock exchange slump with failure, June
1908—Some revival in summer in South American securities; large reduction in volume of foreign trade
1909—Kaffir rubber boom
1910—Stock market collapse, summer; expansion of foreign trade
1911—Retard in expansion of foreign trade
1912—Slight panic on stock exchange, October; decline in bond values
1913—Record foreign trade

France

1876—Civil unrest
1877—Restriction of foreign trade
1878—Successful Paris exposition
1879—Bourse panic, September
1880—Dispute with Italy over Tunis; floating of company for construction of Panama Canal
1881—French occupation of Tunis, November; adoption of tariff system
1882—Severe financial crisis, September and October; security speculation collapse with bourse panic, January; foreign trade dull
1883—Continual panics and scares, security prices very low
1884—Decline of security prices; reduction of foreign trade
1885—Smaller foreign trade
1886—Security prices rise; some increase in foreign trade
1887—Active speculation despite bourse difficulties
1888—Active speculation

1889—Bourse collapses with Panama Canal failure, January; breakdown of copper corner and failure of Comptoir d'Escompte, March; marked revival in foreign trade
1891—Banking difficulties, March; alliance with Russia; imports reach peak
1892—Marked reduction in foreign trade; French work started on Panama Canal, January 20; Panama Canal scandal in France
1893—Anarchist uprisings
1894—Carnot assassinated, June; low point reached in foreign trade
1895—Speculative boom in gold mining shares leading to minor panic, last quarter
1896—Easy money, dull stock exchange; creation of Madagascar as French colony
1897—Increasing stock market activity, rising prices and foreign trade
1898—Difficulty with Great Britain over Fashoda
1899—Relations with Britain strained; security prices decline; foreign trade booms
1900—Paris Exposition, spring; high point reached in foreign trade
1901—Foreign trade restricted
1902—Some revival in foreign trade
1903—Some revival in foreign trade
1904—Slight panic, stock exchange, February
1905—Relations with Germany strained over Morocco
1906—Dispute with Germany settled; foreign trade booms, unfavorable balance
1907—Decline in security prices
1908—Decline in foreign trade
1909—Rising values on bourse
1910—Decline in security prices, especially bonds; foreign trade very active
1911—Threat of war with Germany
1912—Panic on bourse, October; foreign trade very active
1913—War in Northern Africa; record foreign trade

Germany

1876—Minimum reached in security prices
1877—Bank failures and fiscal difficulties from gold speculation; stock exchange disturbed by Russian-Turkish war; increase in exports

1878—Reduced imports, larger exports
1879—Failure of Hamburg bankers; tariff imposed on imports
1880—Big reduction in imports
1881—Bourse booms; increased foreign trade
1882—Increase in foreign trade
1883—Declining stock prices; increase in foreign trade checked
1884—Declining stock prices
1885—Reduction in foreign trade
1886—Revival in stock prices
1887—Speculation in stocks; active foreign trade
1888—Temporary relapse caused by speculation, autumn; growing foreign trade
1889—Bourse boom; boom in imports, decline in exports
1890—Security market depressed
1891—Berlin bank panic and failures, November
1891—Declining values on bourse; decrease in foreign trade
1893—Decrease in foreign trade
1894—Revival in bourse; revival in imports
1895—Gold mining stock boom, collapse in stock prices, November; revival in exports
1896—Beginning of period of marked increase in foreign trade
1897—Marked increase in foreign trade
1898—Marked increase in foreign trade
1899—Revival of speculation on bourse; increase in foreign trade
1900—Collapse in stock prices after April, many bank failures and minor panic, December; adoption of gold standard, large foreign trade
1901—Financial difficulties and bank failures, summer; reduction in foreign trade
1902—Some revival in foreign trade
1903—Rising stock prices; marked increase in foreign trade
1904—Panic, February; important failures
1905—Strained relations with France last nine months; great bourse activity
1906—Some price decline on bourse; settlement of dispute with France over Morocco; marked increase in foreign trade
1907—Declining stock prices; many failures; foreign trade active
1908—Advance in security prices; reduction in foreign trade
1909—Beginning of bourse boom, September; revival of foreign trade
1910—Revival of bourse, summer; marked increase in foreign trade

1911—Decline in stock prices, autumn; Moroccan difficulties, France, beginning in autumn, settled November
1912—Bourse panic, October; expansion of foreign trade
1913—Declining prices on bourse last half-year; increase in foreign trade, chiefly exports

POSTWAR

International

1919—Versailles Treaty signed; League of Nations established
1919–1922—Vilna dispute
1919–1920—Teschen conflict; Polish-Russian war
1921—Rapallo treaty
1921 (November)–1922 (February)—Washington Armaments Limitation Conference
1925—Nine Power treaties (limiting armaments); Locarno treaty
1926—Sharp drop of Belgian franc, Italian lire
1927—Civil war in China
1928—Kellogg-Briand anti-war treaty
1930—Operations begun by Bank for International Settlements
1932—Beginning of Japanese hostilities in China; suicide of Swedish financier Kreuger
1933—World Economic Conference, London
1934—Beginning of Italo-Ethiopian hostilities
1935—Economic sanctions against Italy
1936—Beginning of Spanish civil war; Triparitite currency agreement
1937—Hostilities in China renewed by Japan
1938—Munich pact; occupation of Austria and Sudetenland by German troops
1939—End of Spanish fighting; occupation of Czechoslovakia by Germany; invasion of Albania, by Italy; Japanese-Russian troops in irregular hostilities; beginning of World War II

United States

1919—Postwar boom; United States prohibition law effective; steel strike; soft-coal strike
1920—Collapse of postwar boom in spring
1921—Immigration restriction act; emergency tariff act on agricultural products

1922—Business revival; coal strike; railway strike; Fordney-McCumber tariff (highest to date)
1923—Prosperity in early part of year followed by recession; English war debt arrangement
1924—Mild depression
1925—Anthracite coal strike (July 1925–February 1926)
1926—Collapse of Florida land boom
1928—Start of great boom of 1928–1929
1929—Federal Reserve "moral suasion" policy; New York Stock Exchange collapse
1930—Smoot-Hawley tariff (highest in history)
1931—Hoover moratorium on war debts and reparations
1932—Stimson nonrecognition doctrine toward Japanese activities in China; Reconstruction Finance Corporation (RFC) established; war debt defaults
1933—Bank holidays; start of New Deal; gold called in; gold exports banned; gold-clause in bonds abrogated; establishment of Tennessee Valley Authority (TVA); banking act; Home Owners' Loan Act (HOLC); Securities and Exchange Commission Act (SEC); National Industrial Recovery Act (NIRA), voided May 1935; Agricultural Adjustment Act (AAA)
1934—Stabilization of dollar at $35 per ounce of gold; establishment of Exchange Stabilization Fund; Johnson debt default act; reciprocal tariff act; silver purchase bill; textile strikes; Federal Deposit Insurance Corporation act (FDIC)
1935—Gold clause abrogation upheld by Supreme Court; Wagner labor relations act; social security legislation; public utility holding company act
1936—Reserve requirements raised by Federal Reserve Board; gold sterlization policy; strikes in automobile industry
1937—Widespread labor troubles; reserve requirements raised by Federal Reserve Board; sharp recession
1938—End of gold sterilization; reduction of reserve requirements; formulation of new spending program
1939—"Cash and carry" policy for munitions

United Kingdom

1919—Postwar boom; railway strike
1920—Second half year recession; Irish difficulties

1921—Emergency unemployment act (increased payments); great coal strike
1922—Conservative ministry
1923—Conservative ministry (Baldwin)
1924—Labor government; conservative government
1925—Return to gold standard; coal strike (July 1925–November 1926); removal of gold export prohibition
1926—General strike
1927—Trade agreement with Soviet Russia
1928—End of rubber restriction scheme
1929—Second MacDonald cabinet; Hatry collapse
1930—Naval reduction treaty (London)
1931—Gold standard dropped by Britain; Statute of Westminster
1932—Protective tariff (end of free trade); embargo on new capital issues; Ottawa empire preference agreements in effect; exchange equalization fund
1934—Commercial agreement with France
1935—Conservative victory (Baldwin)
1936—Abdication of Edward VIII
1939—Conscription; war with Germany

France

1919—Tariff increases
1920—Wholesale price peak
1921—Tariff increases
1922—Revival
1923—Inflationary prosperity; occupation of Ruhr by French and Belgian troops
1924—Full employment, but unstable (inflationary) prosperity; beginning of evacuation of Ruhr by French
1925—Prosperity, but soaring prices
1926—Sharp drop of franc
1928—Franc stabilized
1929—Large gold inflows, following franc stabilization
1931—French pressure resulting in failure of Credit Anstalt (Austria)
1933—Exposure of Stavisky frauds
1934—Stavisky riots; textile strikes
1935—Emergency financial powers to institute deflationary policy; Popular Front

1936—Popular Front economic reform legislation—forty hour week, wage increases, sit-in strikes; Bank of France reorganized; franc devalued
1938—Armament industries nationalized
1939—War with Germany

Germany

1919—Allied blockade lifted; Weimar constitution adopted
1920—Continued unrest and riots
1921—Spring revival
1922—Rapallo Treaty with Soviet Russia; end of revival in summer
1923—Bavarian revolt crushed; collapse of mark; Rentenbank opened
1924—Acceptance of Dawes reparation plan
1925—Tariff increases; ratification of Locarno treaty
1927—Prosperity and then drop due to Reichsbank curb on speculation
1928—Recession
1929—Recession, despite spring upturn; Young reparations plan
1930—Gain by Nazis in elections
1931—Projected Austro-German customs union, stopped by French opposition; Exchange control introduced
1933—Hitler named Chancellor
1934—Increased foreign trade controls
1935—Return of Saar to Germany; conscription restored; export assessment tax to promote exports
1936—German troops sent into Rhineland
1938—Austria occupied; Munich
1939—Czechoslovakia occupied; attack on Poland; outbreak of World War II